VDH700 Headend System

User Manual

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Warning

***** Do the operation refer to the explanation below, so that you will not hurt yourselves or shatter your device. Please do not connect power before checking safety installation procedure.

Danger! Electricity!

Use the socket which has the grounded pin. Please pull out the pin from the socket; this is for the protection of the machine, (Non use for a long time) and it can avoid the damage by the flash or electric wave. Layout the circuitry properly, so that it will not be destroyed by hoof or extrusion and bumping by something laid on it.

Urgency instance!

In any case ,please pull out pin in following cases：

1. Wire or pin is damaged.
2. Filter by the liquid, or fall into water.
3. Machine discovers in the rain or water.
4. Drop from a high place or the batholiths is broken.

No Stripping!

1. Please do not strip the machine by yourself.
2. Please do not use the part that appointed by the manufacturer.

Depart From Dampness!

Do not use the machine in the location with high humidity or make the machine in the water or wet place.

No pressing heavily!

Please do not put the machine with other electrical equipment.

No touching!

Please do not touch the machine when thunder storm.

Attention!

1. Please do not lay the machine on a slippery barrow, carcase, spider, bracket or table. Machine will fall and hurt somebody or itself.
2. Please do not cover the hole on the machine, it will affect the normal running of the machine and do not make things fall into the machine, it will damage the machine. These holes are with the action of airiness and avoiding the machine too hot.
3. Please do not lay the machine in the radiance or on the radiator.
4. Please do not lay the machine in a obscuration space.
5. Please use the appointed power, please handhold the insulator on the pin ,do not pull the wire.

Product specification and appearance are based on the actual product purchased; any changes will not be notified accordingly.

Key words of the manual

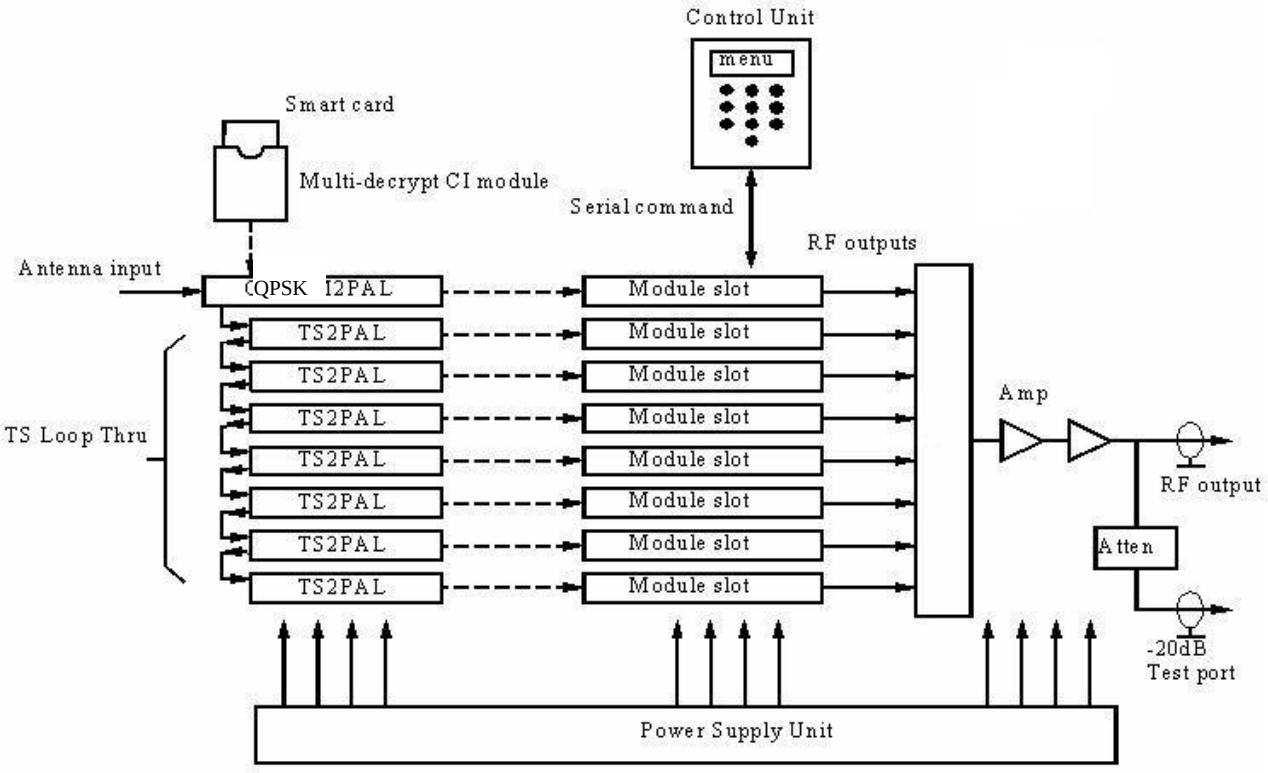
Cassette: means one VDH700CI card.

1. Summary

VDH700 is a DVB SMATV system. VDH700BOX has 8 cassette slots with separate modules. The master module can convert the QPSK signal to the traditional RF carrier such as PAL, NTSC or SECAM. The tuner-saved TS modules share descrambled streams from the master module, which supports Common Interface and could descramble several streams at the same time (Multi-decryption function should be supported by CAM). This system can allocate transport streams to CATV system via each module's forward and mix signal function.

Note: *Please connect ground wire before using the product, double check if it is connected well.*

2. System Block Diagram



Picture 2.1 VDH700 System Diagram

3. Structure & Character

Available Model:

VDH700BOX（Main Frame with Power supply and fans）

VDH700 PROG（Control Unit）

VDH700SAT-CI（QPSK/PAL decoder/modulation module with CI and TS output）

VDH700TS（Decoder/Modulation Module）

VDH700PROG

VDH700PROG is a hot-plug 'keypad + display' unit and is designed to connect to the VDH700BOX, the Main Frame, through a popular RJ11 phone wire. This connection provides the powering and signaling paths. Seventeen buttons with 16 X 4 characters LCD display let user to perform all necessary accesses to the system.

Control unit description

0~9	Num button，input the value of the menu or the number of the channel which you want to view.
Menu	Call the menu and the command box
Exit	Go back to the previous menu or exit the menu
OK	Confirm the performance
▲&▼	Zapping or switch between the options of the menu
◄&►	Decrease/Increase Volume or Moving Left /Right in the menu

Dimension of Control Unit：100mm*189mm*33mm

Note: Control Unit is for setting use, please disconnect it while finish setting.

4. Operation Instruction

4.1 Boot-strap Operation

Power on the Control Unit, the screen will display below message:

```
Programmer
Ver  1,10
Please Press <  >
```

Use ◄ or ► button to control each cassette, the 1st row displays location and category of chosen cassette, for example:

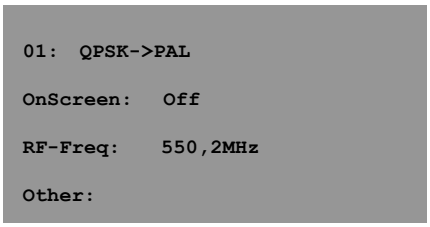
```
01:  QPSK->PAL
OnScreen:    Off
RF-Freq:    550,2MHz
Other:
```

1st row	Displays location and category of chosen cassette
2nd row	On Screen Display switch
3rd row	PAL RF modulation parameter setting
4th row	other settings

Please refer below for operations of each cassette.

4.2 Control Unit Operation Manual

For example, by choosing VDH700SAT-CI module, it will display followings;



Using the ▲▼ buttons to select 2nd~4th row can operate each parameter setting.

4.2.1 OnScreen switch

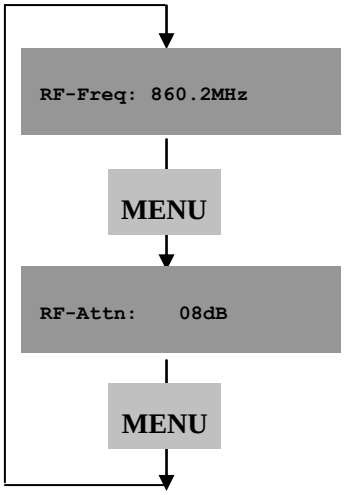
Move the cursor to the 2nd row on LCD by using ▼button, and use ◄or ►button to switch on the OSD (On Screen Display). On the Television set, select the channel corresponding to the RF frequency output by the cassette, you will see the OSD menu showed on screen. For operation on OSD menu, refer to Chapter 4.3.

To turn off the OSD menu, press **Exit** button until the OnScreen be turned "Off".

Note: when the OnScreen is turn "On", all the buttons on the control unit are only applicable for the OSD menu on the TV screen. Using the **Exit** button to exit OSD menu and continue the other settings with the control unit. Refer to chapter 4.4.

4.2.2 PAL Modulator Parameter Settings

3rd row on control unit screen is for parameter settings of PAL modulator which contents 2 settings.



To edit the RF input frequency of the module, press 0~9 numeric button to edit the value. Then press the OK button to confirm the operation and edit the next value.

The range goes from 48.2 MHz to 860.2 MHz.

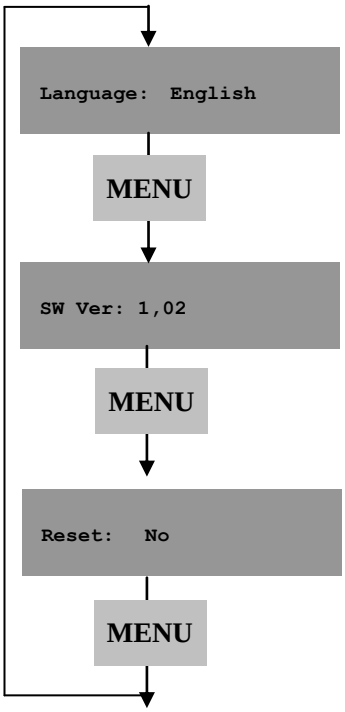
Note 1: the value after the comma CANNOT be edited.

Note 2: if the chosen value is out of the valid range, it will automatically turn back to the previous setting.

RF output attenuation. The valid range goes from 0dB to 18dB. Move the cursor to the digit to change settings. Press **OK** button on control unit to confirm or press Exit button to scrap.

4.2.3 Module Message

4th row on control unit screen is for other settings which contents 3 settings.



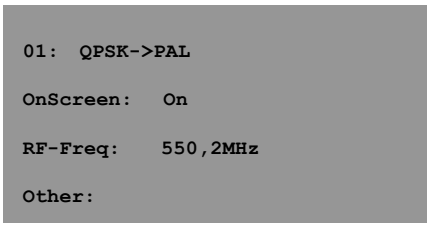
Language setting, currently, only English is available.

Show the version number of the MCU on the cassette.

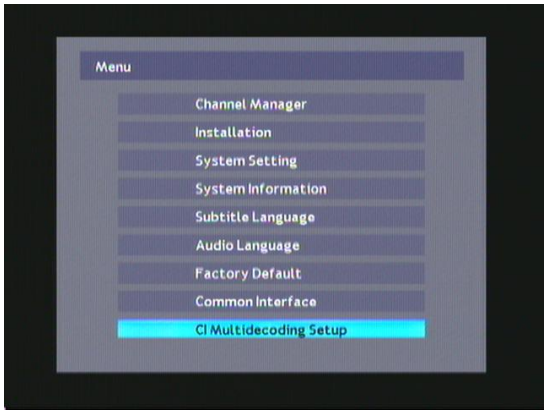
Each cassette can be reset separately when some unexpected problems happen. To reset the cassette, select "**Yes**" and press **OK** button to reboot the cassette.

4.3 OSD Operation

VDH700SAT-CI and VDH700-TS cassette support OSD operation. For each cassette, you can only install and configure the system via the OSD operation.
For example, by choosing VDH700SAT-CI module and switch on the OnScreen option:

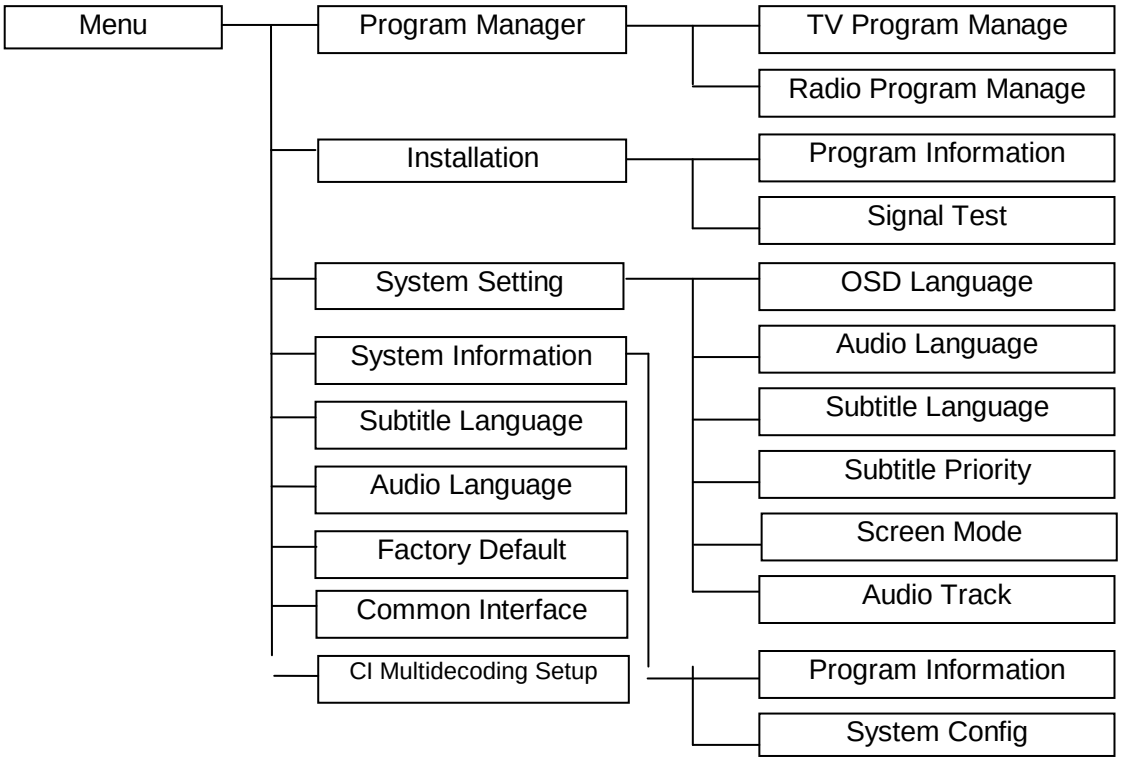


On the Television set, select the TV channel corresponding to the RF frequency output by the cassette, you will see the OSD menu showed on screen.



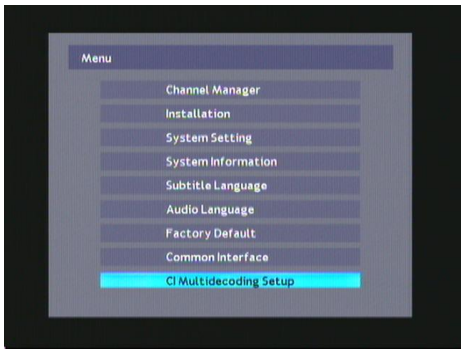
Picture 4.1 OSD Menu

Note: the OSD menu will close itself if no use for 1 minute. Press menu to call the menu back again.



Picture 4.2 the menu structure for VDH700

- Channel Manager
- Installation
- System Setting
- System Information
- Subtitle Language
- Audio Language
- Factory Default
- Common Interface (ONLY for VDH700SAT-CI)



Use the ▲▼ buttons to navigate in the menu. Press the **OK** button to enter a submenu and press the **Exit** button to get back to the previous menu.

4.3.1 Channel Manager

This menu consists of TV channel and Radio channel. Press the ▲▼ buttons to select TV Program Manage or Radio Program Manage, and press **OK** to enter.

To delete a program from the program list (in the TV or the Radio Program Manage) press the ▲▼ buttons to select the program and press the **OK** button to confirm. A cross will be displayed in front of the program name, and the program will not be shown in the program list during View Mode. Press the **OK** button again to cancel the deletion.

Press the **Exit** button to complete the setting and exit the menu. A pop-up box will appear on the screen; you can select **OK** or **Cancel.** Press the **OK** button to confirm, or press the **Exit** button to cancel.

4.3.2 Installation

You can set the parameters for searching programs in the installation menu. Use the ◀▶ buttons to move the cursor, and use the ▲▼ buttons for editing the parameters.

4.3.2.1 Installation for VDH700SAT-CI

For VDH700SAT-CI you need to enter the parameters of the satellite/transponder for searching. Press the **OK** button to confirm and start searching.

Note: When editing the Frequency and the Symbol Rate, you should use five-digit numbers. For example, if the Frequency is 4000, you should add a “0” in front of the “4000”. The correct Frequency is therefore “04000”, and not “4000”.

Installation for SMA701PM-13S

Press the **OK** button to confirm and save the searched programs.

During the search, you can press the **Exit** button to cancel the search.

4.3.3 System Setting

The menu includes the following 6 submenus:

- OSD Language
- Audio Language
- Subtitle Language
- Subtitle Priority
- Screen Mode
- Audio Track

Press the ▲▼ buttons to select a submenu. Then press the ◄► buttons to change the setting.

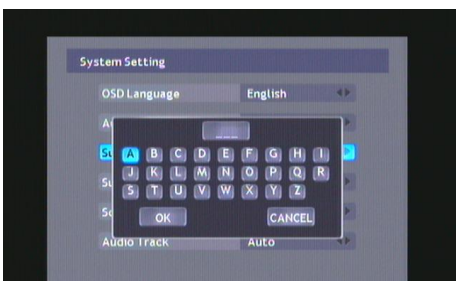
OSD Language

English and **French** are available as OSD menu language. You can press the ◄► buttons to change the setting.

Audio Language

You can set the audio language for each cassette here.
Press the ► button, there will be a dialogue box pop up, type in the abbreviation letters following DVB standard, press OK to confirm. Then the audio language for all programs being decoded by the cassette will be set to be the user setting.
For example, to set the English as the audio language, you will type in ENG and press OK. Then English will be set as the default audio language for each program decoded by the cassette.
Note1: for that program which doesn't content the audio in current set language, the first positioned audio will be output in other language.
Note2: there is another audio language setting option for the playing program, which may change the audio language in System Setting, refer to chapter 4.3.2.5 for more.

Subtitle Language



You can set the Subtitle language for each cassette here.
Press the ► button, there will be a dialogue box pop up, type in the abbreviation letters following DVB standard, press OK to

confirm. Then the subtitle language for all programs being decoded by the cassette will be set to be the user setting.
For example, to set the English as the subtitle language, you will type in ENG and press OK. Then English will be set as the default subtitle language for each program decoded by the cassette.
Note1: for that program which doesn't content the subtitle in current set language, the first positioned subtitle will be output in other language.

Subtitle Priority

There are two alternatives: **EBU first** or **DVB first**. Press the ◄► buttons to change the setting.

Screen Mode

There are three alternatives: **4:3 Letter Box**, **16:9 Full** or **Auto**. Press the ◄► buttons to change the setting.

Audio Track

There are four alternatives: **Auto, MONO, Dual** or **Stereo**. Press the ◄► buttons to change the setting.

Auto: the output audio will keep the mode as what it is in the stream.

MONO: the output audio will be set to MONO regardless what mode it is in the stream, and the audio language is set by user in previous step.

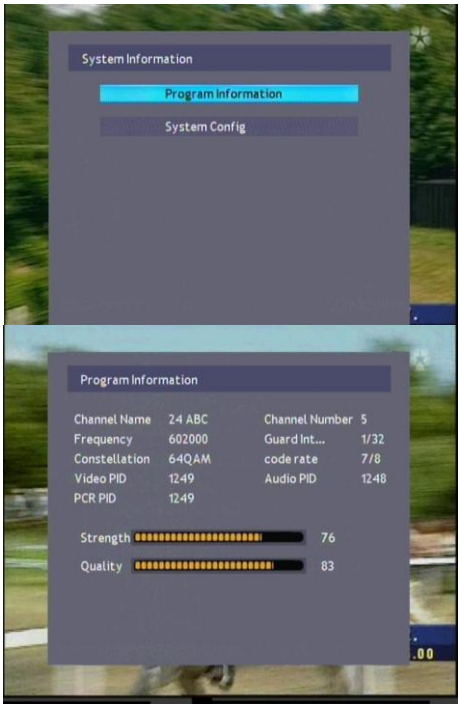
Dual: the output audio will be set to Dual regardless what mode it is in the stream, the audio language is set by user in previous step. User can switch between Dual L or Dual R on the TV set.

Note: Dual L and Dual R may carry different language which is up to the stream itself.

Stereo: the output audio will be set to Dual regardless what mode it is in the stream, the audio language is set by user in previous step.

Note: the outputted audio may be language mixed when the L and R carry different language audio.

4.3.4 System Information



User can check the program information and the system configuration in this menu.

- Program Information
- System Config

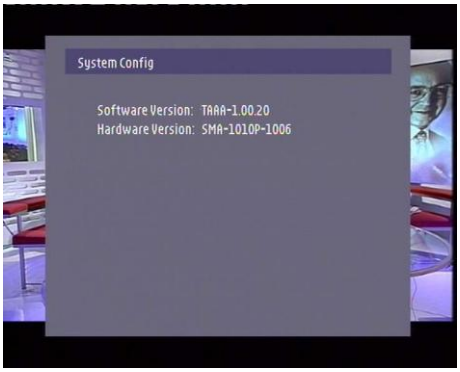
Press the ▲▼ buttons to select the item. Then press the **OK** button to confirm the choice.

Program Information

In this menu the following things can be seen: **program name, program number, frequency, guard int, constellation, code rate, video PID, audio PID, PCR PID** plus signal **strength** and **quality**.

System Config

The **hardware version** and **software version** can be seen in this menu.



4.3.5 Subtitle Language

The subtitle language of the playing program can be changed in this menu.

All available subtitle languages contented in this program will be listed out, use the ▲▼ buttons to select subtitle language or turn it off, press OK button to confirm or press Exit button to scrap.

Note: the setting is only applicable for the current playing program, and when switch to another program and then switch back, the subtitle language will be automatically be set to the system setting.

4.3.6 Audio Language

The audio language can be changed in this menu.

All available audio languages contented in this program will be listed out, use the ▲▼ buttons to select audio language. Press **OK** button to confirm or press **Exit** button to scrap.

Note: the setting is not only applicable for the current playing program, but also for all the other programs being decoded by the cassette. And when the user change the setting in this menu, the same audio language setting will be automatically be set to the system setting.

4.3.7 Factory Settings

Press the ▲▼ buttons to select the factory setting and press

the **OK** button to enter.

Press the **OK** button to confirm, and a pop-up box will appear on the screen. Press the ▲▼ buttons to select **OK** to continue or select **Cancel** to stop.

During this process, you can press the **Exit** button to cancel.

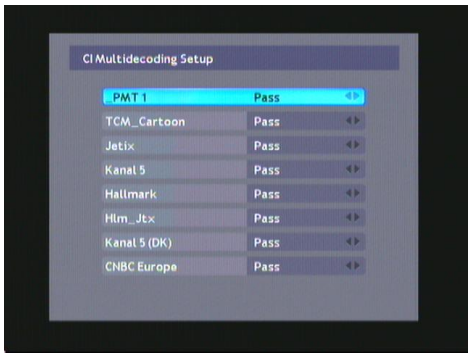
4.3.8 Common Interface

(ONLY for VDH700SAT-CI).

You can plug in the smart card and CAM module in order to watch scrambled programs. Press the **OK** button to enter the menu and press the **Exit** button to go back to the main menu.

Note: Please follow the screen guidance for the detailed operation method. All the operations are varied according to smart card and CAM Module.

4.3.9 CI Multidecoding Setup



(VDH700SAT-CI).

The VDH700SAT-CI supports the multidescramble CAM.

Press the ◄► buttons to change the setting for programs being decoded by the cassette. If a program is set as “Pass”, it will be delivered out directly without being descrambled. If a program is set as “decoding”, it will be delivered to the CAM for descrambling.

In this menu, only 8 programs can be listed each page. Press the ▼ buttons to scroll down to next page for settings.

Note: the number of programs can be descrambled is depended on the CAM itself.

4.4 Other operation

Press **Exit** button until the OSD menu disappeared (but on the control unit, the OnScreen is On),

Use ◄ button to decrease volume or use ► to increase volume.

Use ▼▲ buttons to zapping between programs being decoded by the cassette.

5. Notice in the use

- If you want to replace or add the card of pattern, please do the operation after power off.
- This product is suitable for indoor use only.
- While insert or pull out cassette, try to position cassette to the main board connector correctly in order to avoid connector damage.
- Please keep ground connection well.

- Please keep 10cm(or above) distance between each VDH700BOX while using more than one VDH700BOX.
- If you want to hang the machine on the wall , here has 4 hanging holes , each hole can carry more than 10Kg .
- The core of the signal cable is not suitable too long , it should be 2mm longer than the screw cap .
- There is current output from the LNB input interface , please do not connect the dummy load on it .
- We suggest connecting the dummy load (75Ω) to the LNB loop through interface.
- We suggest connecting the dummy load (75Ω) to the RF input interface.
- We suggest connecting the dummy load to the interface of the main-board in the mainframe box .
- Please build in the protection cap (RJ11) when the interface is not employed , it is for the reason of damp proof.
- If the machine word out of the way, please connect with the agent. Only the professional people is allowed to open the mainframe box and process the installation and maintain .

6. Issues and Problem Solving

Please check on below before notifying vender for repair.

1. No RF signal output?
   Answer: Check the power supply, fuse, and input tension.
2. Serious noisy in analog picture, here are some overlapped pictures?
   Answer: Check the intensity of the neighbor channels, whether they are too strong or not; or frequency overlap; AC voltage too low; or there are disturbing sources around the machine.
3. Controller is of no effect?
   Answer: Pull out and Plug in again, check the pin whether it has a bad touch or not.
4. The VDH700SAT-CI shows the intensity of the satellite signal is 0?
   Answer: check the specification of the LNB. Is there a short circuit? Whether the power supply for the 0-22K/13V-18V is right? If there is short circuit, please cut the LNB, remove the short circuit, wait for 3-5 minutes, link the LNB again.
5. We can not access the card of pattern.
   Answer: check whether the card of pattern has a bad touch or not.